September 24, 2007

To: John Kirlin From: Carl Wilcox

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Department of Fish and Game

DFG Comments on "A Vision for Durable Management of a Sustainable Delta" dated September 11, 2007

Page 1, line 41: The information developing through November is apparently in reference to the upcoming POD synthesis work. The POD group was to present a preliminary report at the September 20 Panel meeting, but the Panel staff decided to wait for the written material. Hopefully, this information will not be too late to incorporate in the Vision.

Page 2, line 6: The text states "These are conditions we see as desirable if not ideal, difficult to achieve but not impractical." Punctuation and grammar changes recommended. Suggested change: "These are conditions we see as desirable, if not ideal; difficult to achieve, but not impractical."

Page 2, lines 9-17: This whole paragraph points out a potential problem with the much expanded look at delta problems. The reason we originally formed CALFED and all the other efforts to fix the delta was because primarily fishery resources were suffering and ESA listings were effecting operations. Now that we have learned about global warming, seismic problems, rising sea level problems (all very difficult issues to predict and impacts may be well into the future), we are almost forgetting "why we got here". This paragraph needs to emphasize that not only are we concerned about what may happen in the future, we also need to be looking at and emphasizing problems that have developed in the past. For example, water operations. Although, the draft rightly elevates ecosystem goals equal to water delivery, there is an underlying "current" to downplay water operation effects as a cause for existing conditions in the system.

Page 2, line 14-16: The text states "Less certain but potentially more catastrophic earthquakes could profoundly alter the physical geography of vast areas of the Delta, obliterating settled areas with major flooding, destroying bridges, levees, roads, power transmission, gas pipelines and buildings." Punctuation and grammar changes recommended. Suggested change: "Less certain, but potentially more catastrophic, earthquakes could profoundly alter the physical geography of vast areas of the Delta, obliterating settled areas with major flooding, and destroying bridges, levees, roads, power transmission, gas pipelines and buildings."

Page 2, line 19-20: The text states "We recognize among all the uses that must be accommodated in the planning for the future of the Delta two overriding priorities-

ecosystem protection and water provision." <u>The Department strongly supports this</u> direction.

Punctuation and grammar changes recommended. Suggested change: "We recognize that, among all the uses that must be accommodated in the planning for the future of the Delta, there are two overriding priorities- ecosystem protection and water provision."

Page 2, line 24: This paragraph should indicate that restoration of historical habitat currently lacking in Delta is important to reestablishing ecological resilience. We do not want and cannot restore to a historical condition, due to physical alterations of the existing Delta. The concept of "ecosystem protection" implies that there is not a need to restore the ecological components of the Delta, such as habitat and physical process.

Throughout the document, terms such as "ecosystem function", "ecosystem protection" and "healthy natural systems" are used. "Ecological integrity" is a better term to use. We also recommend conservation and management of the Delta ecosystem to achieve recovery of at-risk native species as a goal of the as an objective of the ecosystem protection.

Page 2, line 26: We are concerned about the use of the term "practicable" here. It could be very easy to put off dealing with tough environmental issues by saying they are not practicable to fix.

Page 2, line 28: The Department believes this is a critical component of a Vision which can achieve the tow overriding priorities. The text states "water provision we do not envision any increases...." Punctuation and grammar changes recommended. Suggested change: "Although water provision is a priority, we do not envision any increases...."

Page 2, line 33: The text states "...to recover from threats and adapt to changes many of which...." Punctuation and grammar changes recommended. Suggested change: "...to recover from threats and to adapt to changes, many of which...."

Page 2, line 34: The text states "We must also develop policies which respect and work with nature rather than seeking to bend nature to our engineering designs". Punctuation and grammar changes recommended. Suggested change: "We must also develop policies which respect and work with nature, rather than seeking to bend nature to our engineering designs."

Page 2, line 41: This is a good place to identify environmental justice as a policy of the State.

Page 2, lines 45-46: Suggest changing last sentence to the following: In order to move our currently fragmented decision making system toward the proposed vision, there must be changes to institutions, policies, financing systems and distribution of liabilities.

- Page 3, Current Conditions: The text states "Managed primarily for water use, constrained by species protection laws." What exactly is being constrained?
- Page 3, New Design Principles: The text states "Sufficient authority, responsibility, and funding; effective integration across separate systems" Oversight of this group? Who is in the group? How is this group created?
- Page 3, Future Conditions: The text states "Policy making should anticipate levee failures." Policy making should also identify "do not resuscitate" islands in the event of flooding.
- Page 3, Future Conditions: The text states "California better manages dependence on Delta for water." Recommend rewording as follows: "California reduces its dependence on the Delta for water supplies through improved integrated regional water management."
- Page 4, line 9: The text states "...and strategic plan because of their close interrelationships to the Delta in the estuary." Punctuation and grammar changes recommended. Suggested change: "...and strategic plan because of their close interrelationship with the Delta.
- Page 4, lines 11-14: This topic of "inverted delta" takes up a full paragraph in a relatively short "vision". It's not clear what the significance of an inverted delta is to the Vision. The implications should be mentioned.
- Page 4, line 13: The text states "... California's Delta is inverted, which means that is widest and fan-shaped..." Punctuation and grammar changes recommended. Suggested change: "... California's Delta is inverted, which means that it is widest and fan-shaped...."
- Page 4, line 14: The text states "... from outflow to the Pacific and then narrows at Suisun Bay..." Punctuation and grammar changes recommended. Suggested change: "... delete "from outflow to the Pacific.... and then narrows at Suisun Bay and March before heading into..."
- Page 4, line 15: Text for this line should read with added changes from line 14...San Francisco Bay and out into the Pacific. It is the only inverted...."
- Page 4, line 25: Edit as follows: "including many California native species, some of which are listed as threatened or endangered, such as the Delta smelt, and other species that are of commercial and recreational value."
- Page 4, line 27: The text states "This unique land and water form, much of it human altered,..." Punctuation and grammar changes recommended. Suggested change: "This unique mixed land and water form, much of it human altered,...."

Page 4, line 28: The text states "It was reclaimed from its original Tule wetlands into productive..." Punctuation and grammar changes recommended. Suggested change: "
delete "It was reclaimed from" Its original Tule wetlands were turned into....

Page 4, line 38-39: The metric for making this comparison (Figure 2) is of concern in that data may not be comparable.

The text states"...the rapid deteriorating ecosystem health of California's Delta, once among the most productive and diverse environments in North America but today one of the least productive." Punctuation and grammar changes recommended. Suggested change: "...the rapidly deteriorating health of California's Delta ecosystem. Once among the most productive and diverse environments in North America, today the Delta is one of the least productive."

Page 4, line 41: The text states "Overuse of its resources threatens ..." Which resources?

Page 5, line 1: It is not certain that clams are the total problem with productivity. Water projects have had an impact by cropping off primary production.

Page 5, lines 23-25: Suggest changing first sentence to: Because there is so much uncertainty about the effects of future actions and there is such a high likelihood of future shocks, a precise course of decisions and actions required to achieve the vision cannot be charted at this time.

Page 5, line 24: The text states "[too] high a likelihood of future shocks ..." We suggest you use alternative language describing infrequent high magnitude events and infrequent low magnitude events (e.g. earthquakes) as key uncertainties.

Page 7, Figure 2: Also, on the x-axis, what is the production per unit volume? Per liter? The y-axis is fisheries yield in kg. It's not clear what "fisheries yield" we are getting in Suisun Bay. What is the source of these data?

Page 8, line 21: The text states "...Secretary of Resources; other members include the..." Punctuation and grammar changes recommended. Suggested change: "...Secretary of Resources. Other members include the...."

Page 8, line 35: The text states "...and contributed greatly to forming the vision. Punctuation and grammar changes recommended. Suggested change: "...and contributed greatly to forming the vision presented here."

Page 9, line 3: The Delta's agricultural resources (e.g. food, open space, recreation, etc.) should be listed.

Page 9, line 6: The text states "...and is the location of houses, jobs and recreation to millions. Punctuation and grammar changes recommended. Suggested change: "...and is the location of houses, jobs and recreation for millions of people."

Page 9, line 11: The text states "But despite its importance to this system, uses of the Delta are not ..." Punctuation and grammar changes recommended. Suggested change: "Despite the Delta's importance to this system, its uses are not"

Page 9, line 14: The text states "... the delta that effectively addresses the increasing threats and only weak ways to organize...." Punctuation and grammar changes recommended. Suggested change: "... the delta that effectively addresses the increasing threat, and only weak ways to organize....

Page 9, line 17: The text states "One consequence" (of what? Unclear. Suggest deleting and continuing sentence as follows:) Due to environmental conditions..., the state and federal water projects are increasingly unable to guarantee water deliveries to their contractors. It is unclear how the SWP and CWP are adversely affected by the situation described in the paragraph above. It is clear what the regulations are that directly influence operations. This is different than the lack of coherent land use planning and regulation in the Delta and adjacent areas.

Page 9, lines 23-29: The text describes recent precipitous declines in fish populations, continuous introductions of non-native species and then states, "these conditions have led to water supply interruptions and new restrictions on the operation of the State Water Project and the Central Valley Project". This paragraph reflects a bias for water projects and away from fishery issues.

It is unclear how the "continuous introductions of non-native species" is an indicator of decline, suggest deleting this and focus on fish population decline as the real indicator.

Line 26: Substitute This decline has... for (These conditions have...).

This paragraph gives the impression that the fish decline is independent from the operations of the SWP and CWP and their effect on the ecosystem.

Page 9, line 34: substitute ...significantly alter the ecosystem... for ... badly damage... While the scenario described would substantially alter the ecosystem it is not clear that the change would badly damage it. DRMS has not been able to adequately describe the consequences of such an event on the ecosystem.

Page 9, line 40: The text states "While basic research has yielded valuable new knowledge, and more discoveries will continue; a profound uncertainty about how the Delta works is likely to continue for the foreseeable future." Punctuation and grammar changes recommended. Suggested change: "While basic research has yielded and will continue to yield new knowledge, for the foreseeable future there is likely to be profound uncertainty about how the Delta works."

Page 11, line 1: Regarding "catastrophic shocks" see comment on page 5, line 24 above.

Page 11, line 14: The text states "Equally significant, that uncertainty will likely not be eradicated in a system as complex as the Delta in the near-term." Punctuation and grammar changes recommended. Suggested change: "Equally significant, in the near term that uncertainty will likely not be eradicated in a system as complex as the Delta."

Page 11, line 14: Uncertainties are rarely "eradicated" but rather are reduced.

Page 11, line 25: The description of "fragile systems" and their reliance on "brittle parts" could be improved.

Page 11, line 25-30: From an Ecosystem perspective resilience is found in the capacity of the ecosystem to accommodate change. The current Delta ecosystem has been greatly simplified and is managed as a conduit for water delivery. Ecosystem resilience will be achieved by returning natural hydrologic and ecological processes to the system through habitat restoration and appropriate patterns of flow.

Page 12, lines 7-8: The text states "There is too much reliance on <u>a</u> single fragile linchpin that is itself too vulnerable. This reliance is most acute at the times the Delta itself can least afford it..." Punctuation and grammar changes recommended. Suggested change: "There is too much reliance on this single fragile linchpin, and that reliance is most acute at the times the Delta itself can least afford it..."

Page 12, line 22: More discussion on what is meant by "physical or operational separation" would be informative.

Page 14, line 2: The text states "Multiple migration routes for anadromous fish on each major river systems are desirable to...". Anadromous fish are emphasized here, hopefully not to the exclusion of pelagic species. It is unclear what message is being delivered here. Is the intent to provide multiple migration routes through the Delta or alternate routes to minimize entrainment and or predation, or is this a recommendation about conditions upstream of the Delta also. The major factor affecting migration currently is operation of the SWP and CWP.

Punctuation and grammar changes recommended. Suggested change: "Multiple migration routes for anadromous fish on each major river system are desirable to..."

Page 14, line 2-3: Clarify what "their existence" is referring to – the migrations routes or the fish.

Page 14, line 37: The text states "...values society seeks through the Delta." Punctuation and grammar changes recommended. Suggested change: "...values society seeks from the Delta."

The Vision currently lacks any statement of ecosystem goal and objectives. We recommend that the six goals identified in the Ecosystem Restoration Program Strategic Plan should be used for the Vision. These goals have been incorporated into the ERP

Stage 2 Conservation Strategy which has been presented to the SCG and BRTF previously. The Department and it Federal implementation agencies continue to develop the Conservation Strategy. An updated version of the Strategy should be available in mid October. Also included with these comments is a set of goals put forward by the State and Federal Resource agencies for use in the in the Bay Delta Conservation Planning process. These goals may also aid in the Ecodesign Team discussions.